

LAND SNAILS OF KADIAK

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Published records of terrestrial Mollusca from southern Alaska are not numerous. Our distributional knowledge is extremely scanty over wide areas, hence the interest in any new contribution, however small. The ensuing notes derive from a series of specimens taken on Camp Island in Karluk Lake, Kadiak Island, Alaska, Sept. 2, 1935. I am indebted for the privilege of examining and reporting upon them to their collector, L. D. Townsend.

Haplotrema sp. One imperfect dead juvenal.

Euconulus fulvus alaskensis Pilsbry. 12 specimens. These seem to me to resemble the original figures of *alaskensis* much less than they do certain of Pilsbry's comparative figures of *fulvus* s.s. (Proc. Ac. Nat. Sc. Phila. 1910, p. 132, f. 26-27). However, I quite share Henderson's recently expressed inability (Univ. Colo. Stud. 23 (4): 258, 1936) to effect a clear-cut separation of our western form of *fulvus* into two races as is repeatedly attempted in the literature. Certainly there is not the hiatus which Pilsbry's notes and figures might lead one to attempt to find between them. The lack of spiral striae stated as one attribute of *alaskensis* fails to hold even for all Alaskan specimens (*e.g.*, some collected for me by Dr. W. A. Hilton at Skagway) when subjected to sufficiently high magnifications. The question of these races and their distribution would bear a thorough reconsideration, keeping in mind not only the important consideration of microscopic sculpture, but the possibility that both height of shell and number of whorls may increase more rapidly than shell diameter with the approach of full maturity.

Pristiloma arcticum (Lehnert). 3 specimens.

Retinella binneyana occidentalis H. B. Baker. 1 specimen. The spiral striation is more obscure in this example than in the paratype of the subspecies kindly sent me by Dr. Baker, but it can be made out to some extent. So far as revealed by my search of the literature this constitutes a new record for the territory.

Discus cronkhitei (Newcomb). 9 specimens. All are small for the species if mature. I am continually more convinced that

an exhaustive analytical and zoogeographical overhauling of the entire *cronkhitei* series is an important desideratum.

Punctum conspectum (Bland). 9 specimens.

Vertigo modesta (Say). 3 specimens.

Vertigo modesta ultima Pilsbry. 1 mature specimen; a juvenal in the lot may be the same.

DISTRIBUTION OF FOSSIL OYSTERS OF HAWAII

BY J. M. OSTERGAARD

The giant fossil oyster, *Ostrea kamehameha* Pils., formerly known as *O. bryani* Pils., has to within the present time been known to occur only at the Waianae limestone quarry, from whence several complete specimens have been obtained.

This summer the two valves of an entire shell was found in cesspool digging at Kupikipikio, commonly known as Black Point, and located at the eastern side of Diamond Head crater. Upon examination of the limestone dug from the cesspool an entire valve and several fragments of this oyster was found among other fossil pelecypods and gastropods. Persons present during the digging of the cesspool stated that the limestone in which the oyster was found was immediately overlain by a ten-foot stratum of tuff, which in turn was covered by 30 feet of basaltic lava rock. The volcanic tuff belongs to Diamond Head crater, while the basalt overlying it has been ejected from Kupikipikio.

By examining the limestone sea cliff a few hundred feet away from the cesspool, I located at an elevation of about 15 feet above the sea a compact bed of *O. kamehameha* in which numerous specimens occurred firmly cemented into a solid mass. Since the limestone in which this oyster bed was found is free from both tuff and basalt detritus, it is evident that it antedates both Black Point and Diamond Head craters and that the oyster bed is part of that reached by the cesspool digging.

The two localities now known for *O. kamehameha* are about 30 miles apart, linear measurement, and the age is presumably late Pleistocene.

Another fossil oyster, *Ostrea retusa* "Pease" Sby., has been known only from the Pearl Harbor region of the island of Oahu,